

Bill of materials
Table 1. AEK-POW-BMSWTX bill of materials

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	18	C1, C8, C15, C19, C21, C29, C31, C33, C40, C42, C45, C48, C50, C57, C59, C71, C75, C76	47nF	0603 - 50V - X7R Class II	WE	885012206093
2	1	C2	4.7uF	1206 - 50V - X7R Class II	WE	885012208094
3	1	C3	2.2uF	1210 - 100V - X7R Class II	WE	885012209071
4	3	C4, C6, C14	100nF	0603 - 100V - X7R Class II	WE	885012206120
5	1	C5	100pF	0603 - 100V - X7R Class II	WE	885012206102
6	2	C7, C12	N.M.	0603	N.A.	N.A.
7	17	C9, C17, C20, C23, C24, C30, C32, C35, C36, C41, C43, C46, C49, C51, C58, C60, C79	10nF	0603 - 50V - X7R Class II	WE	885012206089
8	1	C10	220nF	0603 - 50V - X7R Class II	WE	885012206125
9	2	C11, C13	2.2uF	0805 - 25V - X7R Class II	WE	885012207079
10	6	C16, C22, C26, C34, C39, C82	22pF	0603 - 50V - NP0 Class I	WE	885012006053
11	6	C18, C25, C37, C80, C83, C84	1uF	0805 - 50V - X7R Class II	WE	885012207103
12	4	C27, C28, C38, C81	N.M.	1206	N.A.	N.A.
13	6	C44, C61, C62, C63, C64, C65	2.2nF	0603 - 50V - X7R Class II	WE	885012206085
14	6	C47, C66, C67, C68, C69, C70	6.8nF	0603 - 50V - X7R Class II	WE	885012206088
15	7	C52, C53, C54, C55, C56, C77, C78	100nF	0603 - 50V - X7R Class II	WE	885012206095
16	1	C72	10uF	1210 - 50V - X7R Class II	WE	885012209073
17	1	C73	68nF	0603 - 50V - X7R Class II	WE	885012206094
18	1	C74	33pF	0603 - 50V - NP0 Class I	WE	885012006054
19	1	CGS	4.7nF	0603 - 50V - X7R Class II	WE	885012206087

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20	2	CN1, CN3		2.54mm - 1 row - KK254 - Male	WE	61900411121
21	1	CN2		2.54mm - 1 row - KK254 - Male	WE	61900611121
22	2	D1, D4	SMA6T68AY, SMA	Automotive 600 W, 68V TVS in SMA	ST	SMA6T68AY
23	2	D2, D9	Green	0805 - Led Green - 3.2V	WE	150080GS75000
24	1	D3	SZMM3Z4V7T1G	4.7V Zener Voltage Regulators, 300mW	Onsemi	SZMM3Z4V7T1G
25	1	D5	Red	0805 - Led Red - 2V	WE	150080RS75000
26	1	D6	Amber	0805 - Led Amber - 2V	WE	150080AS75000
27	1	D7	Yellow	0805 - Led Yellow - 2V	WE	150080YS75000
28	1	D8	Blue	0805 - Led Blue - 3.2V	WE	150080BS75000
29	16	FB1, FB2, FB3, FB4, FB5, FB6, FB7, FB8, FB9, FB10, FB11, FB12, FB13, FB14, FB15, FB16	1K@100MHz	Ferrite Beads Multi-Layer Power 1KOhm 25% 100MHz 1.5A 0.15Ohm DCR 0805	TDK	MPZ2012S102ATD25
30	1	ISOH	61400416021	USB 2.0 Type A, Receptacle, Horizontal, THT	WE	61400416021
31	1	JP1		THT Vertical 3 pins Header, Pitch 2.54 mm, Single Row	WE	61300311121
32	1	P1		2.00mm - WR-WTB - Male Dual Row Horizontal Shrouded Header w. positive locking	WE	62403021722
33	2	P2, P3	61300211121	2.54mm - WR-PHD Pin Header, THT, pitch 2.54mm, Single Row, Vertical, 2p	WE	61300211121
34	1	Q1	STL8N10LF3, PowerFLAT 5x6 WF	Automotive-grade N-channel 100 V, 25 mΩ typ., 7.8 A STripFET™ F3 Power MOSFET in a PowerFLAT™ 5x6 package	ST	STL8N10LF3
35	1	Q2	STD100N10F7, DPAK	N-channel 100 V, 6.8 mΩ typ., 80 A STripFET™ F7 Power MOSFETs in D2PAK, DPAK, TO-220FP, I2PAK	ST	STD100N10F7

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				and TO-220 packages STripFET™ F7 Power MOSFET in a DPAK package		
36	4	Q3, Q4, Q5, Q6	BSS138Q	N-Channel Enhancement Mosfet	NEXPERIA	BSS138Q-7-F
37	1	R1	10k	1206 - ±1% - 0.66W	Panasonic	ERJUP8F1002V
38	2	R2, R88	N.M.	0805	N.A.	N.A.
39	2	R3, R7	10	0603 - ±1% - 0.25W	Panasonic	ERJPA3F10R0V
40	25	R4, R8, R11, R14, R17, R21, R23, R26, R29, R33, R40, R44, R51, R56, R60, R69, R70, R72, R73, R75, R76, R80, R82, R83, R84	100	0603 - ±1% - 0.25W	Panasonic	ERJPA3F1000V
41	1	R5	2.7k	0603 - ±1% - 0.125W	Vishay	MCT06030C2701FP500
42	14	R6, R9, R12, R16, R19, R22, R24, R28, R31, R38, R41, R50, R52, R59	39	2010 - ±1% - 1.25W	TE Connectivity	CRGP2010F39R
43	3	R10, R13, RMREG	N.M.	0603	N.A.	N.A.
44	6	R15, R18, R25, R27, R36, R42	60.4	0603 - ±1% - 0.1W	Panasonic	ERJ3EKF60R4V
45	11	R20, R39, R43, R62, R63, R65, R66, R71, R85, R86, R87	10K	0603 - ±1% - 0.2W	Panasonic	ERJP03F1002V
46	2	R30, R67	6.2K	0805 - ±1% - 0.5W	Panasonic	ERJP06F6201V
47	1	R32	18K	0603 - ±1% - 0.2W	Panasonic	ERJP03F1802V
48	6	R34, R45, R46, R47, R48, R49	10k	0805 - ±1% - 0.5W	Panasonic	ERJP6WF1002V
49	1	R35	10k	0603 - ±1% - 0.1W	TDK	NTCG163JH103HTDS
50	1	R37	3.9k	0603 - ±1% - 0.1W	Panasonic	ERJ3EKF3901V
51	5	R53, R54, R55, R57, R58	1.5K	2010 - ±1% - 2W	TE Connectivity	35021K5FT
52	1	R61	N.M.	N.A.	N.A.	N.A.
53	1	R64	0	0603 - ±1% - 0.1W	Panasonic	ERJ3GEY0R00V
54	3	R68, R79, R89	750	0603 - ±0.5% - 0.25W, 0603 - ±1% - 0.25W	Panasonic	ERJUP3D7500V

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55	3	R74, R77, R78	1.1k	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F1101V
56	1	R81	110K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F1103V
57	1	RG	1K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJPA3F1001V
58	1	RHOT	47	2512 - $\pm 5\%$ - 1W	TE Connectivity	352047RJT
59	1	RPD	100K	0603 - $\pm 1\%$ - 0.25W	Panasonic	ERJP03F1003V
60	2	T1, T2	125uH	Pulse Transformers 125uH	WE	74941000
61	1	U1	L9963E, TQFP 64 10x10x1.0	Automotive chip for battery management applications with daisy chain up to 31 devices	ST	L9963E
62	3	U2, U3, U5	USBLC6-2SC6Y, SOT23-6L	Automotive ESD protection for high speed interfaces.	ST	USBLC6-2SC6Y
63	1	U4	L9963T, SO-16	Automotive general purpose SPI to isolated SPI transceiver	ST	L9963T
64	1	U6	140357145300	WL-OCPT Optocoupler Phototransistor, SOP4, 1 Channel, DC, 35V, 60mA	WE	140357145300
65	1	for blister	60900213421	WR-PHD 2.54 mm Multi-Jumper Jumper with Test Point	WE	60900213421
66	4	for blister	970080365	WA-SPAII Plastic Spacer Stud, metric, internal/ internal	WE	970080365
67	4	for blister	97790603211	WA-SCRW Pan Head Screw w. cross slot M3	WE	97790603211
68	1	for blister	624030213322	WR-WTB 2.00 mm Female Dual Row Terminal Housing w. positive locking	WE	624030213322
69	30	for blister	62400113722	WR-WTB 2.00 mm Female Dual Row Crimp Contact	WE	62400113722
70	2	for blister	61900411621	WR-WTB 2.54 mm Female Terminal Housing	WE	61900411621
71	1	for blister	61900611621	WR-WTB 2.54 mm Female Terminal Housing	WE	61900611621



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72	14	for blister	61910113722	WR-WTB 2.54 mm Female Crimp Contact	WE	61910113722

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